The Effect of ReadToMe Application on Reading Fluency and Motivation in Narrative Texts

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ARTICLE INFO	ABSTRACT
	This quasi-experimental study examined the effect of the ReadToMe application on reading fluency and motivation among eighth-grade Indonesian EFL learners. Twenty-six students from SMP Negeri 1 Tutallu were randomly assigned to experimental (n=13) and control (n=13) groups. The experimental group received instruction using the ReadToMe application with narrative texts, while the control group followed conventional textbook-based methods over six weeks. Reading fluency was assessed through pre-test and post-test measurements using validated rubrics evaluating accuracy, pronunciation, and intonation. Student motivation was measured post-intervention through a 15-item Likert-scale questionnaire examining five dimensions: curiosity, challenge, grades, involvement, and competition. Results revealed significant improvements in the experimental group, with mean scores increasing from 45.85 to 76.00 (N-Gain=0.5484), compared to the control group's increase from 46.31 to 56.77 (N-Gain=0.2015). Independent samples t-test confirmed statistical significance (p<.001) with a very large effect size (Cohen's d=2.67). Questionnaire analysis indicated high motivation levels (80.00%) among experimental group students. These findings suggest that the ReadToMe application effectively enhances both reading fluency and motivation in narrative text instruction, offering practical implications for EFL teachers seeking technology-integrated approaches to address reading challenges in Indonesian educational contexts. *This is an open-access article under the CC BY-SA license*

1. INTRODUCTION

Reading fluency represents a critical foundation for academic success in English as a Foreign Language (EFL) context, encompassing the ability to read accurately, at an appropriate speed, and with proper expression (Rasinski, 2012). In Indonesia, however, reading remains the most challenging skill for junior high school students, particularly due to the discrepancy between English orthography and pronunciation (Rintaningrum, 2019). This challenge is compounded by persistently low literacy rates, with UNESCO data indicating that only 0.001% of Indonesia's population are active readers, ranking the country among the lowest globally in reading engagement (Nasrullah et al., 2024). The consequences of inadequate reading fluency extend beyond language proficiency, affecting critical thinking development, academic performance, and social participation (Le & Nguyen, 2024; Wani & Ismail, 2024). Traditional classroom practices in Indonesian schools often rely on monotonous textbook-based instruction that fails to engage students or address their specific pronunciation difficulties, resulting in decreased motivation and limited skill development (Hutchison & Woodward, 2018). As digital technology

becomes increasingly integrated into educational contexts, mobile applications present promising opportunities to transform reading instruction through interactive, multimodal approaches that support learners' diverse needs.

Recent scholarships have demonstrated the potential of technology-enhanced reading interventions across various educational settings. Studies examining digital reading applications have reported positive outcomes in literacy development, with tools such as Let's Read and Marbel showing effectiveness in improving reading skills among elementary students (Mulyaningtyas & Setyawan, 2021; Yolanda & Damri, 2022). Research on Quizizz has revealed its capacity to engage learners while developing reading comprehension (Hamzah, 2023; Pradnyadewi & Kristiani, 2021), while investigations into voice-assisted technologies like Alexa chatbot have documented improvements in oral reading fluency and comprehension among primary school students (Terzopoulos & Satratzemi, 2020). Furthermore, narrative texts have been identified as particularly effective materials for reading instruction, with research confirming their value in enhancing comprehension and identifying story elements (Lomi et al., 2024; Ramirez-Avila & Barreiro, 2021). Mobile-assisted language learning (MALL) literature emphasizes that applications featuring text-to-speech capabilities and highlighted text significantly increase engagement while reducing learning time across age groups (Mustadi et al., 2022).

Despite this growing body of evidence supporting technology-integrated reading instruction, significant gaps remain in understanding how specific applications function within Indonesian EFL contexts, particularly at the junior high school level. Existing studies predominantly focus on elementary populations or examine generic reading applications without a detailed analysis of their pedagogical features (Klimova & Zamborova, 2020). More critically, limited research has investigated the ReadToMe application specifically, despite its targeted design for beginning English readers incorporating interactive auto-read features, highlighted words, and audio support (Huda & Ardi, 2021; Pratama et al., 2020). The relationship between technology-enhanced reading instruction and student motivation remains underexplored in Indonesian contexts, with few studies examining motivation through comprehensive indicators such as curiosity, challenge, grades, involvement, and competition (Indrayadi, 2021). Additionally, comparative research evaluating technology-based versus conventional reading instruction methods is scarce, limiting evidence-based decision-making for educators seeking effective interventions for struggling readers.

This study addresses these gaps by examining the effect of the ReadToMe application on reading fluency and motivation in narrative texts among eighth-grade Indonesian EFL learners. The investigation is particularly significant given persistent calls for innovative, evidence-based approaches to address Indonesia's literacy crisis (Zati, 2018) and the recognized need for engaging, interactive methods that cultivate reading habits from early adolescence (Wilhelm, 2016). Understanding how technology-mediated instruction influences both skill development and affective factors is essential for designing effective reading interventions that address the multidimensional nature of reading difficulties (Wigfield et al., 2016). This research responds to the imperative for contextualized studies examining specific technological tools within clearly defined educational settings, providing empirical evidence to inform pedagogical practice in similar EFL contexts (Newell et al., 2011). The study is guided by two research questions: (1) Does the implementation of the ReadToMe application significantly improve students' reading fluency in narrative texts compared to conventional instruction? (2) To what extent does the ReadToMe application influence students' motivation toward reading narrative texts?

2. METHODS

2.1 Research Design

This study employed a quasi-experimental design with a non-equivalent control group, utilizing pre-test and post-test measurements to examine the effect of the ReadToMe application on reading

fluency and motivation (Creswell & Poth, 2018). The design was selected due to practical constraints preventing random assignment of individual students, a common limitation in educational research conducted within intact classroom settings (Maciejewski, 2020). Two groups participated in the study: an experimental group receiving instruction through the ReadToMe application with narrative texts, and a control group following conventional textbook-based methods. While this design introduces potential threats to internal validity, particularly selection bias, it provides ecologically valid results reflecting realistic classroom conditions (Behi & Nolan, 1996).

2.2 Research Context and Participants

The research was conducted at SMP Negeri 1 Tutallu, a public junior high school in Indonesia, over six weeks. This site was purposively selected because students demonstrated characteristic challenges faced by Indonesian EFL learners: difficulties with English orthography-pronunciation correspondence, low reading interest, and limited exposure to interactive learning materials. The population comprised of 40 eighth-grade students distributed across three classes. Using simple random sampling at the class level, two intact classes were randomly assigned as experimental and control groups (Pyrczak & Oh, 2018). Class VIII C (n=13) served as the experimental group, while Class VIII B (n=13) functioned as the control group, yielding a total sample of 26 participants. Baseline equivalence testing through an independent samples t-test on pre-test scores revealed no significant differences between groups (p=.792), suggesting initial comparability. All participants were beginning-level English learners aged 13-14 years with similar socioeconomic backgrounds and limited prior exposure to technology-enhanced language learning.

2.3 Instruments

Reading Fluency Assessment. Reading fluency was measured using performance-based assessments with narrative texts of equivalent difficulty level, selected based on lexical complexity and length appropriateness for eighth-grade learners. Assessment employed a validated rubric adapted from Rasinski (2006) and Hudson et al. (2005), evaluating four dimensions: (1) fluency (smoothness and pace), (2) accuracy (correct word recognition), (3) pronunciation (phoneme articulation and word stress), and (4) intonation (appropriate pitch, rhythm, and expression). Each dimension was scored on a four-point scale: excellent (4), good (3), fair (2), and poor (1), yielding maximum scores of 100 points. To establish inter-rater reliability, two trained raters independently scored 30% of recordings, achieving Cohen's kappa of 0.84, indicating substantial agreement. Discrepancies were resolved through consensus discussion.

Motivation Questionnaire. Student motivation was assessed using a 15-item Likert-scale questionnaire developed based on established reading motivation frameworks (Indrayadi, 2021; Wigfield & Eccles, 2000). The instrument measured five theoretically grounded dimensions: curiosity (items 1-3), challenge (items 4-6), grades (items 7-9), involvement (items 10-12), and competition (items 13-15). Response options ranged from strongly disagree (1) to strongly agree (5). The questionnaire underwent content validation by three expert reviewers and pilot testing with 20 students from a comparable population, yielding an overall Cronbach's alpha of 0.87, with subscale reliability coefficients ranging from 0.76 to 0.89, indicating acceptable to good internal consistency (Qomariyah et al., 2022).

2.4 Intervention Procedures

The experimental group participated in four 90-minute sessions implementing the ReadToMe application. Session 1 introduced students to the application's features (text-to-speech, highlighted words, adjustable reading speed) and narrative text structure, followed by guided listening and collaborative reading activities. Session 2 focused on vocabulary development through the application's interactive glossary and pronunciation practice, concluding with competitive reading games. Session 3 emphasized narrative structure analysis, with students working in groups to identify orientation,

complication, resolution, and reorientation in application-based texts. Session 4 integrated skills through independent reading, written comprehension assessments, and peer discussions. Each session concluded with reflection activities where students articulated learning experiences and challenges.

The control group received instruction using conventional methods common in Indonesian EFL classrooms. Teachers employed textbook-based narrative texts, utilized teacher-led reading aloud, conducted traditional vocabulary instruction through word lists and definitions, and assigned comprehension questions for individual completion. While both groups received equivalent instructional time and covered similar narrative content, the control group lacked the multimodal, interactive features characterizing the experimental intervention.

2.5 Data Collection Procedures

Data collection occurred in three phases. First, pre-tests assessed baseline reading fluency through individual oral reading performances of a narrative text ("The Lion and the Mouse"), which were audio-recorded and subsequently scored using the established rubric. Second, following the six-week intervention, post-tests measured reading fluency using a comparable narrative text ("The Ant and the Grasshopper") to avoid practice effects while maintaining equivalent difficulty. Third, motivation questionnaires were administered to the experimental group immediately following the post-test to capture motivation levels after sustained application use. All procedures received ethical approval from the school administration, and parental consent was obtained for all participants.

2.6 Data Analysis

Descriptive statistics (mean, median, mode, standard deviation, range) characterized reading fluency scores for both groups. Prerequisite testing included the Shapiro-Wilk test for normality (α=0.05) and Levene's test for homogeneity of variance. Given that assumptions were satisfied, parametric procedures were employed. An independent samples test examines between-group differences in post-test scores (α=0.05). Normalized gain (N-Gain) calculated learning improvement using the formula: N-Gain = (post-test - pre-test)/(maximum score - pre-test), with values interpreted as low (<0.3), medium (0.3-0.7), or high (>0.7) following Hake (1999). Cohen's d assessed effect size for group comparisons, with values of 0.2, 0.5, and 0.8 indicating small, medium, and large effects, respectively. Motivation questionnaire data were analyzed through descriptive statistics, calculating frequency distributions, percentages, and mean scores for each dimension and overall motivation. All statistical analyses were conducted using SPSS version 26.0.

3. FINDINGS

This section presents the findings organized according to the two research questions guiding this investigation: (1) the effect of the ReadToMe application on students' reading fluency in narrative texts, and (2) its influence on students' motivation. Results are presented through descriptive statistics, prerequisite tests, hypothesis testing, and motivation analysis.

3.1 Descriptive Statistics

Table 1 presents descriptive statistics for the experimental group's reading fluency scores. The pre-test mean of 45.85 (SD=6.19) increased substantially to 76.00 (SD=6.08) in the post-test, representing a 30.15-point improvement. The median score rose from 44.00 to 75.00, while the mode increased from 44 to 69. Score distribution ranged from 38-56 in the pre-test and 69-88 in the post-test. The consistent standard deviation values suggest that improvement occurred relatively uniformly across students rather than being concentrated among high achievers.

Table 1. Descriptive Statistics for Experimental Group Reading Fluency Scores

Statistic	Pre-test	Post-test
n	13	13
Minimum	38	69
Maximum	56	88
Mean	45.85	76.00
Median	44.00	75.00
Mode	44	69
Range	18	19
SD	6.19	6.08

Table 2 displays descriptive statistics for the control group. The pre-test mean of 46.31 (SD=6.26) increased modestly to 56.77 (SD=10.38) in the post-test, representing a 10.46-point gain. The median advanced from 44.00 to 56.00, with the mode shifting from 44 to 50. Notably, the standard deviation increased substantially from pre-test to post-test, indicating greater score variability and less consistent improvement patterns compared to the experimental group.

Table 2. Descriptive Statistics for Control Group Reading Fluency Scores

Statistic	Pre-test	Post-test
n	13	13
Minimum	38	44
Maximum	56	75
Mean	46.31	56.77
Median	44.00	56.00
Mode	44	50
Range	18	31
SD	6.26	10.38

3.2 Performance Classification Analysis

Performance levels were categorized using established criteria: excellent (81-100), good (66-80), fair (51-65), and poor (<50). Table 3 illustrates the dramatic shift in experimental group classification, with no students achieving excellent or good ratings at pre-test, compared to 38.4% excellent and 61.6% good at post-test. Conversely, Table 4 shows the control group's more modest progress, with 46.2% remaining in the poor category post-intervention and no students reaching the excellent level.

Table 3. Performance Classification Distribution: Experimental Group

Category	Interval	Pre-test		Post-test	
		Frequency	Percentage	Frequency	Percentage
Excellent	81-100	0	0%	5	38.4%
Good	66-80	0	0%	8	61.6%
Fair	51-65	2	15.4%	0	0%
Poor	<50	11	84.6%	0	0%
Total		13	100%	13	100%

Table 4. Performance Classification Distribution: Control Group

Category	Interval	Pre-test		Post-test	
		Frequency	Percentage	Frequency	Percentage
Excellent	81-100	0	0%	0	0%
Good	66-80	0	0%	4	30.8%
Fair	51-65	2	15.4%	3	23.0%
Poor	<50	11	84.6%	6	46.2%
Total		13	100%	13	100%

3.3 Normalized Gain Analysis

N-Gain scores quantified learning improvement magnitude. Table 5 demonstrates that 92.3% of experimental group students achieved medium gains ($0.3 \leq g \leq 0.7$), with 7.7% reaching high gains ($g > 0.7$). The experimental group's mean N-Gain of 0.5484 indicates moderate to substantial improvement. In contrast, Table 6 reveals that 69.2% of control group students exhibited low gains ($g < 0.3$), with only 30.8% achieving medium gains and none reaching high levels. The control group's mean N-Gain of 0.2015 represents minimal improvement.

Table 5. N-Gain Classification: Experimental Group

Classification	N-Gain Range	Frequency	Percentage
Low	$g < 0.3$	0	0%
Medium	$0.3 \leq g \leq 0.7$	12	92.3%
High	$g > 0.7$	1	7.7%
Total		13	100%
Mean N-Gain		0.5484	

Table 6. N-Gain Classification: Control Group

Classification	N-Gain Range	Frequency	Percentage
Low	$g < 0.3$	9	69.2%
Medium	$0.3 \leq g \leq 0.7$	4	30.8%
High	$g > 0.7$	0	0%
Total		13	100%
Mean N-Gain		0.2015	

3.4 Mastery Achievement Analysis

Using the school's established Minimum Mastery Criterion (KKM) of 75, mastery achievement rates were calculated. Table 7 shows that while no experimental group students achieved mastery at pre-test, 69.2% reached this threshold post-intervention. Table 8 indicates minimal mastery achievement in the control group, with only 7.7% meeting the criterion post-instruction.

Table 7. Mastery Achievement: Experimental Group

Assessment	KKM	Mastery Achieved	Mastery Not Achieved
Pre-test	75	0%	100%
Post-test	75	69.2%	30.8%

Table 8. Mastery Achievement: Control Group

Assessment	KKM	Mastery Achieved	Mastery Not Achieved
Pre-test	75	0%	100%
Post-test	75	7.7%	92.3%

3.5 Prerequisite Testing

Shapiro-Wilk tests assessed the normality of N-Gain score distributions (Table 9). Results indicated normal distribution for both the experimental group (W=0.973, p=.931) and control group (W=0.880, p=.072), satisfying parametric test assumptions. While the control group's p-value approached the critical threshold, it remained above $\alpha=0.05$, supporting the parametric procedure.

Table 9. Shapiro-Wilk Normality Test Results

Group	Statistic	df	Significance
Experimental	0.973	13	.931
Control	0.880	13	.072

Levene's test examined variance equality across groups (Table 10). Results revealed homogeneous variances (F=1.801, p=.192), satisfying the homogeneity assumption for an independent samples t-test.

Table 10. Levene's Test of Homogeneity of Variance

Basis	Levene Statistic	df1	df2	Significance
Mean	1.801	1	24	.192
Median	0.566	1	24	.459

3.6 Hypothesis Testing

An independent samples t-test compared N-Gain scores between groups (Table 11). Results demonstrated statistically significant differences (t(24)=7.298, p<.001, two-tailed), with the experimental group (M=0.5484, SD=0.156) significantly outperforming the control group (M=0.2015, SD=0.089). Cohen's d calculation yielded an effect size of 2.67, indicating a very large practical significance. These findings lead to rejection of the null hypothesis (H_0) and acceptance of the alternative hypothesis (H_1), confirming that the ReadToMe application implementation significantly improves students' reading fluency in narrative texts compared to conventional instruction.

Table 11. Independent Samples T-Test Results

Variable	Equal Variances Assumed	t	df	Sig. (2-tailed)	Mean Difference	Cohen's d
N-Gain Score	Yes	7.298	24	<.001	0.3469	2.67

3.7 Motivation Analysis

Table 12 presents a detailed motivation analysis across five dimensions. Involvement emerged as the strongest motivator (M=4.21, 84.10% high), followed by grades (M=4.13, 82.56% high), challenge (M=4.03, 80.51% high), and curiosity (M=3.87, 77.44% high). Competition showed more variability (M=3.77, 75.38% medium), with responses distributed across categories, suggesting this dimension less consistently motivated students.

Table 12. Motivation Questionnaire Results by Dimension

Dimension	Item	Scores	Mean Score	Max Score	Percentage	Category
Curiosity	1	49	3.77	5	75.38	Medium
	2	49	3.77	5	75.38	Medium
	3	53	4.08	5	81.54	High
Challenge	4	54	4.15	5	83.08	High
	5	50	3.85	5	76.92	High
	6	53	4.08	5	81.54	High
Grades	7	56	4.31	5	86.15	High
	8	49	3.77	5	75.38	Medium
	9	56	4.31	5	86.15	High
Involvement	10	52	4.00	5	80.00	High
	11	59	4.54	5	90.77	Very High
	12	53	4.08	5	81.54	High
Competition	13	54	4.15	5	83.08	High
	14	47	3.62	5	72.31	Medium
	15	46	3.54	5	70.77	Medium
Mean/Average		52	4.00		80.00	High

The cumulative motivation score reached 780 points from a maximum possible 975 points (15 items × 13 students × 5-point scale), yielding an overall motivation percentage of 80.00%, categorized as " high" according to established interpretation criteria (Amir, 2015). This indicates that the ReadToMe application implementation substantially enhanced students' motivation across multiple dimensions, though with notable variation in competition-related aspects.

Comparative analysis (Table 13) synthesizes primary outcomes across groups. The experimental group demonstrated superiority across all metrics: post-test mean scores (76.00 vs. 56.77), N-Gain coefficients (0.5484 vs. 0.2015), effect size magnitude (d=2.67, very large), and mastery achievement rates (69.2% vs. 7.7%). These convergent findings provide robust evidence for the ReadToMe application's effectiveness in enhancing reading fluency among Indonesian EFL learners, while also fostering high motivation levels supporting sustained engagement with reading activities.

Table 13. Comparative Summary: Experimental vs. Control Groups

Metric	Experimental Group	Control Group	Difference
Pre-test Mean (SD)	45.85 (6.19)	46.31 (6.26)	-0.46
Post-test Mean (SD)	76.00 (6.08)	56.77 (10.38)	19.23
Mean Gain	30.15	10.46	19.69
N-Gain	0.5484	0.2015	0.3469
Mastery Achievement	69.2%	7.7%	61.5%
Cohen's d			2.67
Overall Motivation	80.00%	Not measured	-

4. DISCUSSION

This study investigated the effect of the ReadToMe application on reading fluency and motivation among eighth-grade Indonesian EFL learners through a quasi-experimental design comparing technology-enhanced and conventional instructional approaches. The findings provide empirical

evidence supporting the effectiveness of mobile-assisted language learning in addressing persistent reading challenges within Indonesian educational contexts. This discussion interprets the results in relation to existing literature, examines potential explanations for observed patterns, acknowledges study limitations, and considers practical implications for EFL instruction.

The first research question examined whether the ReadToMe application implementation significantly improved students' reading fluency in narrative texts compared to conventional instruction. Results demonstrated substantial improvements in the experimental group, with mean scores increasing from 45.85 to 76.00 and N-Gain coefficients reaching 0.5484, indicating moderate to high learning gains. In contrast, the control group showed modest improvement from 46.31 to 56.77 with considerably lower N-Gain values of 0.2015. The independent samples t-test confirmed statistical significance with a very large effect size (Cohen's d=2.67), while mastery achievement rates revealed that 69.2% of experimental group students reached the established criterion compared to only 7.7% in the control group. These convergent findings strongly suggest that ReadToMe provides superior support for reading fluency development compared to traditional textbook-based methods. The multimodal features of the application, particularly text-to-speech functionality with synchronized highlighting, likely facilitated students' ability to connect written forms with accurate pronunciation, addressing a fundamental challenge in English reading for Indonesian learners where orthography-phonology correspondence differs markedly from their first language. The interactive nature of the application may have enabled repeated exposure and practice opportunities in a low-anxiety environment, allowing students to develop automaticity in word recognition and appropriate prosody through modeling and self-paced repetition.

These findings align closely with previous research demonstrating positive effects of digital reading applications on literacy development. Pujiariani & Cathrin (2025) similarly reported significant improvements in learning outcomes through interactive application use, while Osmani (2024) documented enhanced reading fluency among students using technology-based interventions. The present study's results particularly resonate with Sari et al.'s (2019) findings regarding increased reading interest through application-based instruction, suggesting that technological tools address both cognitive and affective dimensions of reading development. Furthermore, Dinata and Evelyn (2022) emphasized multimedia's role in enhancing comprehension, which corresponds with this study's observation that students in the experimental group demonstrated more consistent improvement patterns, as evidenced by stable standard deviation values across pre-test and post-test measurements. This consistency suggests that the application's scaffolding features supported diverse learners rather than benefiting only high-achieving students. Bazinet's (2015) research confirms that narrative texts enhance fluency and confidence when delivered through engaging formats, provides additional theoretical support for combining this text type with interactive technology.

However, the control group's modest improvement merits careful consideration. While conventional methods yielded statistically significant gains from pre-test to post-test, the effect was substantially smaller and accompanied by increased score variability, suggesting uneven learning outcomes. This finding partially aligns with Amalia et al. (2018), who observed positive but limited effects of traditional reading instruction. The increased standard deviation in the control group's post-test scores (10.38 compared to pre-test 6.26) indicates that conventional methods may benefit some students while leaving others behind, potentially exacerbating achievement gaps. Sanchez et al.'s (2021) comparative study similarly noted that while both interactive and conventional approaches yield progress, technology-enhanced methods demonstrate superior consistency and magnitude of improvement. The present study's findings contrast somewhat with Chee et al. (2017), who reported no improvement with conventional methods, suggesting that context-specific factors, including teacher quality and instructional design, significantly influence conventional method effectiveness. It is important to acknowledge that the control group's limited gains may reflect not the inherent inadequacy

of conventional methods but rather the specific implementation within this study's timeframe and context, highlighting the importance of instructional quality regardless of technological integration.

The second research question explored the ReadToMe application's influence on students' motivation toward reading narrative texts. Questionnaire analysis revealed overall motivation levels of 80.00%, categorized as high, with dimensional analysis showing particular strength in involvement (84.10%), grades (82.56%), and challenge (80.51%) indicators, while curiosity (77.44%) and competition (75.38%) showed somewhat lower but still positive levels. These findings suggest that the application successfully engaged multiple motivational dimensions, supporting sustained reading practice. The high grades motivation likely reflects the application's immediate feedback mechanisms and visible progress tracking, which provided students with concrete evidence of achievement and competence development. This aligns with self-determination theory's emphasis on competence as a fundamental psychological need driving intrinsic motivation (Ryan & Deci, 2000). The strong involvement scores suggest that interactive features fostered active participation rather than passive consumption of content, transforming reading from a teacher-directed activity into a student-centered exploratory process. Challenge motivation findings indicate that the application's adjustable difficulty levels and diverse text selections enabled students to engage with appropriately demanding materials, supporting optimal challenge experiences associated with flow states and deep engagement (Csikszentmihalyi, 1990).

The relatively lower competition scores, while still positive, reveal important nuances in how different motivational factors operate within this context. Indonesian educational culture traditionally emphasizes collective rather than individualistic achievement orientations (Hofstede, 2001), which may explain why competition proved less consistently motivating than other dimensions. Some students may have felt uncomfortable with competitive elements, preferring collaborative or individual mastery experiences. This finding underscores the importance of culturally responsive design in educational technology, suggesting that applications should offer flexibility in emphasizing different motivational appeals based on learner preferences and cultural contexts. These motivation findings substantially extend existing literature by providing a granular analysis of specific motivational dimensions rather than treating motivation as a unitary construct. While Indrayadi (2021) established the theoretical framework for examining reading motivation through multiple indicators, the present study demonstrates how technology-mediated instruction differentially influences these dimensions, offering insights for more targeted intervention design.

This study contains several limitations that should inform the interpretation of findings. The small sample size (n=26) from a single school limits generalizability to broader populations and contexts. The six-week intervention period, while demonstrating initial effects, cannot address long-term sustainability or whether improvements persist after novelty effects dissipate. The quasi-experimental design without true randomization introduces potential selection bias despite baseline equivalence testing. Additionally, motivation data were collected only from the experimental group post-intervention, preventing direct comparison with control group motivation or assessment of motivational changes over time. Finally, the study focused exclusively on reading fluency without examining comprehension, vocabulary development, or transfer to other language skills.

Despite these limitations, findings offer important implications for practice and research. For educators, results suggest that mobile applications like ReadToMe can effectively supplement conventional instruction, particularly for pronunciation practice and independent reading, where teacher-led approaches prove insufficient. The high motivation levels indicate that technology-enhanced methods may counteract declining adolescent reading interest, potentially establishing sustainable reading habits. For policymakers, findings support investment in educational technology infrastructure and professional development for effective digital tool integration, though implementation must be culturally responsive rather than adopting universal approaches. The varied

competition motivation results highlight this need for cultural sensitivity. Future research should examine ReadToMe's effectiveness across different proficiency levels and age groups, investigate long-term retention effects, explore optimal blends of technology and traditional instruction, and incorporate qualitative methods to understand students' experiences with specific application features. Additionally, studies should include comprehensive pre-post motivation assessments for both experimental and control groups to more rigorously evaluate technology's motivational impact across diverse educational contexts.

5. CONCLUSION

This quasi-experimental study examined the effect of the ReadToMe application on reading fluency and motivation among eighth-grade Indonesian EFL learners. Results demonstrated that technology-enhanced instruction significantly outperformed conventional textbook-based methods across multiple indicators. The experimental group achieved substantial improvements, with mean scores increasing from 45.85 to 76.00 and N-Gain coefficients of 0.5484, compared to the control group's modest gains from 46.31 to 56.77 with N-Gain of 0.2015. Statistical analysis confirmed significance ($p<.001$) with a very large effect size (Cohen's $d=2.67$), while mastery achievement rates reached 69.2% in the experimental group versus only 7.7% in the control group. These findings provide robust evidence that the ReadToMe application's multimodal features, particularly text-to-speech functionality with synchronized highlighting, effectively address the orthography-pronunciation challenges characteristic of Indonesian EFL contexts. Motivation analysis revealed that the application fostered high engagement levels (80.00%), with particularly strong effects on involvement, grades, and challenge dimensions, though competition showed more variability, reflecting cultural preferences for collaborative over individualistic learning orientations. These results suggest that technology-mediated instruction addresses both cognitive skill development and affective engagement, offering a promising approach to Indonesia's persistent literacy challenges. However, findings must be interpreted considering limitations, including small sample size, single-site implementation, short intervention duration, and absence of comparative motivation data from the control group. Future research should conduct longitudinal studies examining retention effects, investigate implementation across diverse contexts and proficiency levels, and incorporate qualitative methods to understand learners' experiences with specific application features. Despite these limitations, this study contributes valuable empirical evidence supporting mobile-assisted language learning integration in resource-constrained educational settings, demonstrating that appropriately designed technological tools can substantially enhance both reading fluency development and student motivation when combined with sound pedagogical practices.

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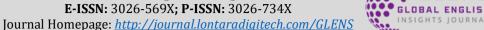
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